中国拟台蚱属的研究及一新种记述
(直翅目: 蚱科)

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摘要: 记述分布于中国、尼泊尔及北朝鲜地区拟台蚱属的种类 7 种, 包括 1 新种, 即墨脱拟台蚱 *Formosatettixoides motuoensis* sp. nov, 并提供了拟台蚱属的分种检索表和种类分布。模式标本保存于陕西师范大学动物研究所昆虫标本室。
关键词: 直翅目; 蚱科; 拟台蚱属; 分类; 订正; 新种
中图分类号: Q969.26 **文献标识码**: A **文章编号**: 0454-6296(2010)03-0331-04

A revision of the genus *Formosatettixoides* Zheng (Orthoptera: Tetrigidae), with description of one new species from China

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Abstract: The paper describes 7 species of the genus *Formosatettixoides* Zheng from China, Nepal and North Korea, including one new species from Xizang, China: *Formosatettixoides motuoensis* sp. nov. A key to all species of the genus including their distribution records provided. The specimens of new species are kept in the Institute of Zoology, Shaanxi Normal University.
Key words: Orthoptera; Tetrigidae; *Formosatettixoides*; taxonomy; revision; new species

拟台蚱属 *Formosatettixoides* 为郑哲民于 1994 年建立, 模式标本为采自浙江的 *Formosatettixoides zhejiangensis* Zheng, 1994。郑哲民和傅鹏 (1992) 报道了采自湖南的 *F. hunanensis* Zheng *et* Fu, 1992; 郑哲民和梁铬球 (1993) 报道了采自福建的 *F. wuyishanensis* Zheng *et* Liang, 1993; 郑哲民和毛本勇 (1997) 报道了采自云南的 *F. yunnanensis* Zheng *et* Mao, 1997; Ingrisch (2001) 报道了采自尼泊尔的 *F. subapterus* Ingrisch, 2001, 因此拟台蚱属共计有 5 种。作者在整理中国拟台蚱属时, 在西藏墨脱地区又发现 1 新种, 同时在整理台蚱属时发现 Kostia (1993) 报道的采自北朝鲜的 *Formosatettix slivae* Kostia, 1993 应转移到拟台蚱属中, 至此拟台蚱属共计有 7 种。

拟台蚱属 *Formosatettixoides* Zheng, 1994

Formosatettixoides Zheng, 1994, *Acta Zootaxonomica Sinica*, 19(1): 97; Liang *et* Zheng, 1998, Fauna Sinica, Insecta Vol. 12, Orth. Tetrigoidea, 200; Zheng, 2005, Fauna of Tetrigoidea from Western China, 370 – 371; Deng, Zheng and Wei, 2007, Fauna of Tetrigoidea from Yunnan and Guangxi, 329.

模式种: *Formosatettixoides zhejiangensis* Zheng, 1994

体小型, 头顶明显突出于复眼前, 中隆线明显, 突出于复眼前; 头顶宽为一眼宽的 1.6 ~ 2 倍; 侧面观头顶与颜面隆起呈角形突出, 颜面隆起在复眼前凹陷。前胸背板屋脊形, 中隆线片状隆起, 前胸背板后突到达腹端或后足股节中部后; 前胸背板侧片后缘仅具一个凹陷, 后角向后向下, 顶圆形。具前、后翅, 外观可见。后足跗节第 1 节长于第 3 节。产卵瓣外缘具细齿。

本属已知 7 种, 分布于中国、尼泊尔及北朝鲜, 在中国主要分布于浙江、福建、云南、湖南及西藏。

基金项目: 国家自然科学基金项目 (39391800)
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收稿日期 Received: 2009-10-12; 接受日期 Accepted: 2010-01-24

拟台蚱属分种检索表

1(2) 头顶前缘钝角形突出。分布于北朝鲜 ························ **1. 斯氏拟台蚱 *Formosatettixoides slivae*（Kostia, 1993）com. nov.**

2(1) 头顶前缘平直

3(10) 前胸背板前缘呈角形突出

4(9) 前胸背板侧观上缘呈弧形隆起，前端呈锐角形突出

5(6)侧面观头顶与颜面隆起呈锐角形突出；背面观前胸背板前缘呈锐角形；前胸背板后突到达腹端或后足股节膝部，顶尖；雌性下生殖板后缘中央三角形突出。分布于浙江 ·· **2. 浙江拟台蚱 *F. zhejiangensis* Zheng, 1994**

6(5)侧面观头顶与颜面隆起呈直角形；背面观前胸背板前缘呈钝角形

7(8)前胸背板后突到达后足股节膝部，顶圆，中央具小三角形凹口；沟前区侧隆线平行；前胸背板后突下缘平直，后区侧隆线亦平直，两者间区域狭；具前后翅；后足胫节褐色。分布于云南 ·················· **3. 云南拟台蚱 *F. yunnanensis* Zheng *et* Mao, 1997**

8(7) 前胸背板后突到达后足股节 3/4 处，顶尖；沟前区侧隆线收缩；前胸背板后突下缘弧形弯曲，后区侧隆线亦弯曲，两者间区域宽；缺前翅具后翅；后足胫节黑色，近基部具淡色环。分布于西藏 ························ **4. 墨脱拟台蚱 *F. motuoensis* sp. nov.**

9(4)前胸背板侧观上缘近平直，前端不突出；前胸背板后突到达后足股节 4/5 处，近端部明显收缩，顶尖细。分布于福建 ········ ·· **5. 武夷山拟台蚱 *F. wuyishanensis* Zheng *et* Liang, 1992**

10(3) 前胸背板前缘平直

11(12) 前胸背板后突到达后足股节 2/3 ~ 3/4 处；侧面观颜面隆起在复眼前突出，在侧单眼处凹陷。分布于湖南 ······················ ·· **6. 湖南拟台蚱 *F. hunanensis* Zheng *et* Fu, 1992**

12(11) 前胸背板后突到达后足股节中部；侧面观颜面隆起在复眼前不突出，在侧单眼处不凹陷。分布于尼泊尔 ······················ ·· **7. 亚无翅拟台蚱 *F. subapterus* Ingrisch, 2001**

Key to species of *Formosatettixoides* Zheng

1(2) Anterior margin of vertex obtuse-angled. Distributed in North Korea ······ **1. *Formosatettixoides slivae*（Kostia, 1993）com. nov.**

2(1) Anterior margin of vertex straight

3(10) Anterior margin of pronotum angled.

4(9) Upper margin of pronotum arched in profile, acute-angled in front

5(6) Vertex and frontal ridge forming acute-angled in profile; dorsal view, anterior margin of pronotum acute angular; hind process reaching the to Pof abdomen or knee of hind femur, apex sharp; hind margin of subgental plate of female with a triangular convex in the middle. Distributed in Zhejiang ······························ **2. *F. zhejiangensis* Zheng, 1994**

6(5) Vertex and frontal ridge forming right-angled in profile; dorsal view, anterior margin of pronotum obtuse angular.

7(8) Hind process reaching the knee of hind femur, apex round, with a small triangular concave in the middle; lateral keels of prozona parallel; lower margin of hind process straight, lateral keels of metazoan straight too, interspaced area narrow; with tegmina and wing; hind tibia ochrous. Distributed in Yunnan ······························ **3. *F. yunnanensis* Zheng *et* Mao, 1997**

8(7) Hind process reaching three fourths of hind femur, apex sharp; lateral keels of prozona contract back ward; lower margin of hind process curved, lateral keels of metazoan curved too, interspaced area wide; with wing and without tegmina; hind tibia black, with a light ring near the basal part. Distributed in Xizang ······························ **4. *F. motuoensis* sp. nov.**

9(4) Upper margin of pronotum nearly straight in profile, not produced in front; hind process reaching four fifths of hind femur, distinctly narrowed in apex, apex sharp. Distributed in Fujian ······························ **5. *F. wuyishanensis* Zheng *et* Liang, 1993**

10(3) Anterior margin of pronotum straight.

11(12) Hind process reaching two thirds to three fourths of hind femur; frontal ridge convex before eyes and concave before lateral ocelli. Distributed in Hunan ······························ **6. *F. hunanensis* Zheng *et* Fu, 1992**

12(11) Hind process reaching middle of hind femur; frontal ridge not convex before eyes and not concave before lateral ocelli. Distributed in Nepal ······························ **7. *F. subapterus* Ingrisch, 2001**

1 斯氏拟台蚱 *Formosatettixoides slivae*（Kostia, 1993）com. nov.

Formosatettix slivae Kostia, 1992, *Acta Zool. Cracov.*, 35(3): 423 – 425.

观察标本：根据文献记载，该种具有退化的前、后翅，外观可见后翅下缘，故应转入拟台蚱属中。

分布：北朝鲜。

2 浙江拟台蚱 *Formosatettixoides zhejiangensis* Zheng, 1994

Formosatettixoides zhejiangensis Zheng, 1994, *Acta Zootaxonomica Sinica*, 19(1): 97 – 98.

观察标本：2♀，浙江：丽水，1984-08. 童雪松。

分布：浙江（丽水、开化、庆元）。

3 云南拟台蚱 *Formosatettixoides yunnanensis* Zheng *et* Mao, 1997

Formosatettixoides yunnanensis Zheng *et* Mao, 1997,

Entomological Journal of East China, 6(1)：6.

观察标本：1♂1♀，云南：大理（苍山），1995-08-08，毛本勇。

分布：云南（大理、宾川、邓川、丽江、祥云、景东）。

4 墨脱拟台蚱，新种 *Formosatettixoides motuoensis* sp. nov.（图 1～3）

雌性：体小型，粗壮。头部不突出于前胸背板水平之上；头顶宽为一眼宽的 1.7 倍，前缘平直，略突出于复眼之前，中隆线直延伸至后头；侧面观，头顶与颜面隆起呈直角形，在触角之间部分略突出；颜面隆起在触角之间部分的宽度略狭于触角基节宽。触角丝状，着生于复眼下缘之间。复眼圆球形，突出；侧单眼位于复眼前缘的中部。前胸背板屋脊形，中隆线高，呈片状，侧面观背板上缘呈弧形；前缘钝角形；沟前区侧隆线向后收缩；肩角宽钝圆形；后突到达腹端及后足股节端 3/4 处，顶尖；前胸背板侧片后缘具一个凹陷；后角向下，顶圆形；后突下缘弧形弯曲，后区侧隆线亦弯曲，两者之间区域宽。缺前翅，后翅较大，外观可见。前、中足股节较宽扁，上、下缘平直；后足股节粗壮，上侧中隆线不具膝前齿，膝齿直角形；后足胫节外侧具刺 7 个，内侧具刺 6 个；后足跗节第 1 节长于第 3 节，第 1 跗节下之三垫依次渐大，顶尖。产卵瓣狭长，上瓣之长为宽的 4 倍，上、下瓣均具细齿。下生殖板长略大于宽，后缘平直，中央三角形突出，下生殖板腹面具纵脊。

体暗褐色；后足股节内侧及下侧黑色；后足胫节黑色，近基部具淡色环。

雄性：未知。

体长：♀10～11 mm；前胸背板长：♀ 8.5～9 mm；后足股节长：♀ 6.5～7 mm。

正模♀，西藏：墨脱（背崩），870 m，2003-08-12，任国栋采；副模 1 ♀，同正模。

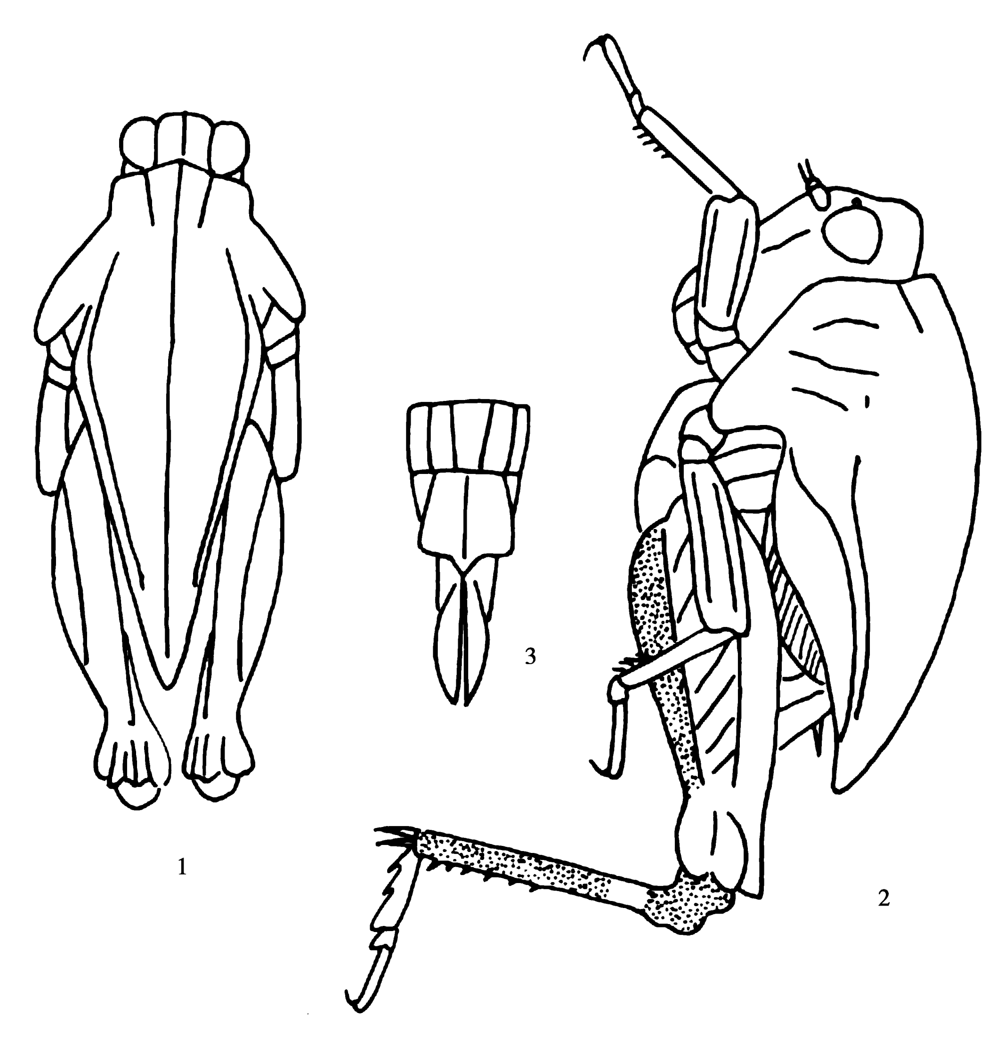


图 1－3 墨脱拟台蚱 *Formosaatettixoides motuoensis* sp. nov.（♀）

Figs. 1－3 *Formosaatettixoides motuoensis* sp. nov.（♀）

1：整体背面 Body, dorsal view；2：整体侧面 Body, lateral view；3：雌性腹端腹面♀，subgenital plate, ventral view.

该新种近似于云南拟台蚱 *Formosatettixoides yunnanensis* Zheng *et* Mao, 1997，主要区别见表1。

表1 墨脱拟台蚱与云南拟台蚱之主要区别

Table 1 Differences between *Formosaatettixoides motuoensis* sp. nov. and *F. yunnanensis*

特征 Character	云南拟台蚱 *F. yunnanensis*	墨脱拟台蚱 *F. motuoensis*
前胸背板后突	不到达腹端宽圆，中央具小三角形凹口	到达腹端顶尖
沟前区侧隆线	平行	收缩
后突下缘及后区侧隆线	平直，两者之间区域狭	弯曲，两者之间区域宽
前、后翅	具前、后翅	缺前翅具后翅
中足股节下缘	波状	平直
雌性下生殖板后缘	具三齿	中央三角形突出
后足胫节	褐色	黑色，近基部具淡色环

词源：种名以模式产地 Motuo 为名。

5 武夷山拟台蚱 *Formosaatettixoides wuyishanensis* Zheng *et* Liang, 1993

Formosaatettixoides wuyishanensis Zheng *et* Liang, 1993, *Oriental Insects*, 27: 218 – 219

观察标本：1♀，福建：崇安（三港），1960-05-17，郑哲民。

分布：福建(崇安)。

6 湖南拟台蚱 *Formosaatettixoides hunanensis* Zheng *et* Fu, 1992

Formosaatettixoides hunanensis Zheng *et* Fu, 1992, *Journal of Hunan Education Institute*, 10(2): 75 – 76

观察标本：1♂2♀，湖南：大庸(猪石头)，1990-08-10，彭国胜。

分布：湖南(大庸)。

7 亚无翅拟台蚱 *Formosaatettixoides subapterus* Ingrisch, 2001

Formosaatettixoides subapterus Ingrisch, 2001, *Senckenbergiana Biologica*, 81(1/2): 178 – 179.

观察标本：根据文献记载。

分布：尼泊尔。

参考文献（References）

Ingrisch S, 2001. Orthoptera of the Nepal expeditions of Prof. J. MARTEN (Mainz) (Insecta, Orthoptera). *Semckenbergiana Biologica*, 81(1/2): 147 – 186.

Kostia D, 1993. A new species of the genus *Formosatettix* Tinkham, 1937 (Orthopotera: Tetrigidae) from North Korea. *Acta Zool. Cracov.*, 35(3): 423 – 425.

Liang GQ, Zheng ZM, 1998. Fauna Sinica, Insecta, Vol. 12, Orthoptera, Tetrigoidea. Science Press, Beijing. 278 pp. [梁铬球，郑哲民，1998. 中国动物志，昆虫纲，第12卷，直翅目，蚱总科. 北京：科学出版社. 278页]

Zheng ZM, 1994. A new genus and species of Tetrigidae from Zhejiang Province (Orthoptera). *Acta Zootaxonomica Sinica*, 19(1): 97 – 99. [郑哲民，1994. 浙江省蚱科一新属新种(直翅目). 动物分类学报，19(1): 97 – 99]

Zheng ZM, 2005. Fauna of Tetrigoidea from Western China. Science Press, Beijing. 501 pp. [郑哲民，2005. 中国西部蚱总科志. 北京：科学出版社. 501页]

Zheng ZM, Fu P, 1992. A new species of Tetrigidae from Hunan Province (Orthoptera). *Journal of Hunan Education Institute*, 10(2): 75 – 76. [郑哲民，傅鹏，1992. 湖南省蚱科1新种(直翅目). 湖南教育学院学报，10(2): 75 – 76]

Zheng ZM, Liang GQ, 1993. A new genus and three new species of Tetriginae from China (Orthoptera: Tetrigidae). *Oriental Insects*, 27: 217 – 223.

Zheng ZM, Mao BY, 1997. A survey of Tetrigoidea from Henduan Mountains west of Yunnan. *Entomological Journal of East China*, 6(1): 5 – 11. [郑哲民，毛本勇，1997. 滇西横断山地区蚱总科的调查. 华东昆虫学报，6(1): 5 – 11]

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Appendix: Brief descriptions of new taxa

Formosatettixoides motuoensis sp. nov. (Figs. 1 – 3)

This new species is allied to *Formosatettixoides yunnanensis* Zheng *et* Mao, 1997, but differs in: (1) hind process reaching three fourths of hind femur, apex of hind process sharp; (2) lateral keels of prozona contract backward; (3) lower margin of hind process curved, lateral keels of metazoan curved too, interspace area wide; (4) with wing and without tegmina; (5) lower margin of midfemur straight; (6) hind margin of subgenital plate of female with a triangular convex in the middle; (7) hind tibia black.

Length of body: ♀10 – 11 mm; length of pronotum: ♀8.5 – 9 mm; length of hind femur: ♀ 6.5 – 7 mm.

Holotype♀, Xizang: Motuo, 95°4′E, 29°3′N, Alt. 870 m, 12-June-2003, collected by Ren Guo-Dong; paratype 1♀, the same data as holotype.

Etymology: The specific name is derived from the type locality name "Motuo".